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The effect of the SWOM strategy on the methods of guiding the teacher and peers to learn swome offensive handball skills for students

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Abstract

The primary objective of this study was to develop educational units utilizing the strategy known as "SWOM" in the methods of teacher guidance and pairing. These units were designed to teach various offensive skills in handball to the participants of the research sample. Additionally, the study aimed to assess the effectiveness of these units and determine the impact of employing the SWOM strategy in both teacher guidance and peer-based learning approaches for the second stage sample. The present study aimed to compare two methods in the post-test phase of the study's variables. It was assumed that there would be statistically significant differences between the pre- and post-test results of the experimental and control groups in terms of learning offensive skills in handball among student participants. Additionally, it was expected that similar differences would be observed in the post-test results between the two groups for the variables being investigated. The researcher utilized an experimental approach to ensure equivalence between the experimental and control groups in terms of the pre- and post-test. The educational units were administered to a sample of 30 students, with 10 students randomly selected from each division. This sample represented 38.46% of the overall research community. The researcher implemented their expertise in both methods by delivering one educational unit per week over a period of 8 weeks. Subsequently, post-tests were conducted. The collected data were analyzed using appropriate statistical methods to fulfill the research objectives. The researcher has derived significant findings, indicating that both methods employed had a discernible influence on enhancing offensive skill proficiency. Notably, the strategy (SWOM) implemented with peer guidance exhibited a preference for improving performance levels compared to the strategy (SWOM) implemented under the guidance of the teacher, as well as the control group that adhered to the teacher-led method.

Keywords: SWOM strategy, methods, offensive, handball skills

Introduction

Teaching methods exhibit variability in order to accommodate the diverse educational needs of individuals and groups, as well as to align with the specific conditions and capacities of the educational process (Tzenios, 2020) ^[39]. Additionally, these methods are tailored to the ages, genders, and physical and mental abilities of learners. As the demand for contemporary educational tools, techniques, and strategies grows, there is a heightened emphasis on fostering students' abilities to think critically, conduct research, engage in constructive criticism, actively listen, and cultivate discipline (Parker & Thomsen, 2019) ^[29]. To achieve the desired outcome, it is imperative that the student assumes a central role in the educational process, prioritizing their own efficacy over that of the teacher (Selvaraj & Azman, 2020) ^[34]. The field of physical education has witnessed significant advancements in scientific development, resulting in the emergence of various sophisticated methods and strategies (Miranda *et al.*, 2021) ^[27]. These strategies have been implemented across all areas of physical education, leading to a shift in the control of the curriculum from the teacher to the student. Consequently, the student becomes the central focus of the educational process (O'Brien *et al.*, 2020) ^[28]. It is crucial to select appropriate strategies that align with the age stage of the students in order to effectively facilitate their learning (Tohara, 2021) ^[37]. It is advisable to avoid employing an instructional approach that emphasizes rote learning, ideological

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conditioning, and unquestioning compliance with directives (Tran, 2022) [38]. Handball is a sport renowned for its attributes of precision, velocity, tension, exhilaration, and structured execution (Banjevic *et al.*, 2022) [11].

The game encompasses a range of skills, varying in difficulty from straightforward to intricate, with offensive maneuvers relying fundamentally on interdependence. The educational approach holds significant significance in ensuring the efficacy of the learning process (Aase, 2022) [1]. In order to facilitate the teacher's effectiveness in their profession, it is imperative to employ pedagogical approaches that foster the learner's inclination towards independent inquiry, constructive evaluation, and self-sufficiency (Bon *et al.*, 2022) [12]. Additionally, it is crucial to consider the unique variations in learning styles and abilities among students within the classroom setting (Kurniawan, Rahayu & Hanani, 2020) [26]. The significance of the research lies in the utilization of the previously unexplored SWOM strategy, as well as the consideration of individual differences and the implementation of two distinct methods under the guidance of a teacher. These methods are based on the principles of individualized education, where learners progress at their own pace, and peer-guided application, which emphasizes teamwork and the acquisition of offensive handball skills. The SWOM strategy, which originates from social constructivist theory, is founded upon the amalgamation of cognitive mental skills and processes with academic material (AlAli, Wardat & Al-Qahtani, 2023) [7]. This approach emphasizes the cultivation of productive mental habits and clear integration of thinking skills within the context of content-based instruction (Hussein, Hasan & Al-Jadaan, 2022) [21].

The problem of the study

Education is intricately connected to the methodologies employed by educators (Chaaban, Al-Thani & Du, 2021) [13]. Given that both the teacher and the student are central to the educational process, optimal outcomes can be achieved through the selection of appropriate strategies (Abdulrahman *et al.*, 2020) [3]. A physical education teacher, who also serves as a researcher, has observed a deficiency in the utilization of strategies for teaching sports skills, specifically handball (Abdulla, Whipp & Teo, 2022) [2]. It is noted that teachers predominantly rely on instructional methods that emphasize the transmission of information to students, with a direct application approach (Fasold *et al.*, 2020) [16]. This approach places less emphasis on the cultivation of critical thinking skills, cognitive abilities, and the fostering of self-confidence among students (Tashpulatov, 2022) [36]. Consequently, there exists a heavy reliance on the teacher within the educational process. In order to restrict the student's ability to engage in discussions and dialogues with their peers, the researcher opted to employ the SWOM strategy in both instructional methods, with the guidance of the teacher and peers. The objective was to ascertain the impact of these methods on the acquisition of offensive handball skills among second-year students in the Faculty of Physical Education and Sports Sciences.

The objectives of the study

1. Preparing units using the SWOM strategy in the methods of directing the teacher and peers for SWOM offensive handball skills for students of the second stage.
2. Investigate the impact of employing the SWOM approach, in conjunction with instructor direction and peer collaboration, on the acquisition of offensive

abilities in handball within the selected research sample.

The hypotheses of the study

1. There are statistically significant differences between the results of the pre- and post-tests of the three groups (experimental and control) in learning SWOM offensive handball skills for students.
2. There are statistically significant differences between the results of the post-tests of the three research groups in learning SWOM offensive handball skills for students.
3. There are statistically significant differences between the results of the post-tests of the three research groups in SWOM students' offensive handball skills.

The areas of the study

Human Area: Second Stage Students in the Faculty of Physical Education and Sports Sciences at Misan University, for the academic year (2022-2023) first semester.

Time Area: The period from (15/2/2023) until (8/5/2023).

Spatial area: Faculty of Physical Education and Sports Sciences Hall at Misan University.

Methodology

Research Methodology and Field Procedures

Research Methodology

The researchers opted for an experimental methodology and afterwards devised an experimental design including three equivalent groups (experimental and control). The design incorporated a pre- and post-test to assess the cognitive processes employed by the researcher in addressing a specific topic (Johnson *et al.*, 2013) [23].

Research Community and Sample

The researcher identified the research community as the students of the second stage in the Faculty of Physical Education and Sports Sciences at Misan University for the academic year (2022-2023). The total number of students in this community is 243, distributed over 8 academic divisions. For the purpose of this study, the researcher deliberately selected three divisions, namely Division D (consisting of 28 students), Division G (consisting of 30 students), and Division C (consisting of 31 students). This selection resulted in a total of 89 students included in the study. The researcher proceeded to exclude the underperforming students and players who were practicing the game from the initial pool of students. This resulted in a research sample consisting of 78 students, which were distributed across three divisions. Through a lottery process, 10 students were selected from each division to form the research sample, representing 32.09% of the total population. The two educational methods were randomly assigned to the divisions through a lottery process. Division (g) represented the first group, which utilized the strategy (SWOM) in a teacher-guided approach. Division (D) comprised the second group, which employed the strategy (SWOM) in a peer-guided approach. Division (C) served as the control group, utilizing the teacher's method. Additionally, four students from Division (E) were included as part of the exploratory experiment but were not part of the research sample. The purposeful selection of the sample is based on the supervision of the subject teachers themselves, specifically focusing on the divisions (g, d, c). Additionally, there is the potential to modify the variables pertaining to the skill sections and components of the lesson (preparatory, main, closing), along with the number of exercises and repetitions for each of the three groups.

Equivalence of Research Groups Means of collecting information, tools and devices used in research

First: Means of Gathering Information

1. Arab and foreign sources and references.
2. Resolution.
3. Testing and measurement.
4. Interview.
5. Observation.

Second: Tools and Devices Used

1. Handball court legal dimensions
2. Handballs type as spacer 10.
3. Laser discs.
4. Whistles (4).

5. Stopwatches (4).
6. HP Laptop.
7. Tape measure.

Equivalence of research groups

The participants in the study are considered to be at a beginner level, and they share similar characteristics such as age and gender. They are all at the same stage of study. In order to determine the comparability of the experimental and control groups, the researcher has utilized the results of preliminary tests. The findings presented in Table 1 indicate that there were no significant differences observed in any of the offensive tests. This suggests that the groups were equivalent and started the study on a level playing field.

Table 1: Shows the equivalence of research groups in skill tests

Skills	Unit of Measurement	Source of variance	Sum of squares	DF	Mean of squares	F	Sig
Shooting	Degree	Between groups	2.85	2	1.42	2.54	0.098
		With groups	15.15	27	0.561		
Dodging	Degree	Between groups	2.21	2	1.10	1.99	0.156
		With groups	15.02	27	0.556		
Passing	Number	Between groups	0.217	2	0.108	0.433	0.653
		With groups	6.75	27	0.250		

Main experience

Identification of study variables

The independent study variable, namely SWOM's strategy in the manner of teacher and peer guidance, was determined by the researcher following an extensive analysis of scholarly sources and references. Additionally, consultation and agreement with the supervisor were sought in this process. The researcher utilized the terminology specified for the dependent variable, as outlined in the curriculum of the Faculty of Physical Education and Sports Sciences at Misan University for the academic year (2022-2023). This curriculum is designed for the second stage of the handball lesson. Regarding offensive skills in handball, the researcher selected SWOM offensive skills from the prescribed curriculum and incorporated them into the study. These offensive skills were identified for the purpose of examination and analysis.

Tests of SWOM Offensive Skills in Handball

1. Tests of shooting offensive skill in handball (Fathi, 2022) ^[17].
2. Tests of dodging offensive skill in handball (Salih & Musaed, 2020) ^[32].
3. Tests of passing offensive skill in handball (Hussein & Hrebid, 2023) ^[19].

Exploratory Experiment

The researcher conducted an exploratory experiment on a sample of four students from the second stage, who were not part of the main research sample. The experiment employed the "SWOM" strategy, which involved teacher and peer guidance, specifically focusing on Division (E) for the academic year 2022-2023. The experiment took place on February 22, 2023, at 10:15 am. The purpose of the exploratory experiment was to provide realistic training and identify both the negatives and positives encountered by the researcher during the tests, with the aim of achieving optimal results. This preliminary study allowed the researcher to select appropriate research methods and tools for their subsequent research.

Induction Unit

The initial sessions were carried out with a sample comprising 10 students from Division G, 10 students from Division D, and 10 students from Division C. These sessions took place on February 25, 2023, at 11:15 am in the hall of the Faculty of Physical Education and Sports Sciences at Misan University. The purpose of these sessions was to provide an overview of the necessary tasks and responsibilities to be fulfilled by the participants.

Pre-Tests

The pre-tests were administered to the research sample, consisting of both the experimental and control groups, on (26-27/ 2/ 2023) at (11:15) am in the hall of the Faculty of Physical Education and Sports Sciences at the University of Misan. The tests used were designed to assess offensive behavior. Prior to administering the tests, participants were provided with instructions and guidance on how to perform and apply for the tests. Additionally, all necessary preparations and requirements for the tests were made. The purpose of conducting these pre-tests was to ensure that the groups within the research sample were comparable in the variables being studied, thus establishing a common starting point for the research.

Application of Educational Units

The educational units of both methods were implemented on the two experimental groups, incorporating offensive skills in handball that were appropriate for the subject and the research sample. The distribution of these skills occurred over a period of eight weeks, starting from a specific date in 2023. Each method consisted of eight educational units, with one unit being covered per week. The duration of each unit was 90 minutes, and the researcher was responsible for all sections of the educational unit, including the preparatory, main, and final components. The curriculum followed for practical lessons was in accordance with the guidelines set by the Faculty of Physical Education and Sports Sciences at Misan University. The educational unit is structured into two components: A general warm-up lasting 10 minutes, followed

by a private warm-up of the same duration. This is then followed by the main segment, which spans 30 minutes, with an additional 7 minutes allocated for a specific activity. The educational component and the acquisition of skills are elucidated through the utilization of the six skills encompassed within the SWOM method. This approach aims to facilitate the assimilation and comprehension of knowledge by students, enabling them to effectively execute the acquired skills. Subsequently, the practical application of these abilities is emphasized, with a duration of 35 minutes. The study involves assessing the performance of students in a series of repetitions, which is divided into three stages. Each stage consists of four repetitions. In the first stage, the mean assistance height is set at a slanted slope of 50 cm. In the second stage, the height is reduced to 30 cm, and in the third stage, it is further reduced to 20 cm. Following the completion of a skill, the aforementioned talent is subsequently employed using identical repetitions and without the assistance of any aids. In the experimental study, two different types of guidance were employed: teacher guidance and peer guidance. The first experimental group received feedback from the teacher, while the second group received feedback from a student observer. The student observer was provided with a form containing instructions and observations on each student's skill performance, as well as suggestions for improvement. Each group was assigned a lesson sequence consisting of three parts: yellow, blue, and red. The final part of the lesson lasted for a duration of 10 minutes. Based on the provided timetable, it is indicated that each division is allocated one lecture each week per section. The implementation of the educational modules in the two instructional approaches was concluded on April 15, 2023.

Post-Tests

The post-tests were administered subsequent to the completion of the implementation of the educational units for both the experimental and control research groups on April 17, 2023, at 11:15 am. The researcher, accompanied by the assistant team, conducted the post-tests using identical conditions to the pre-test, including the location, timing, test methodology, and assistant team, in order to ensure precise and controlled outcomes.

Statistical Methods

The Social Statistical Bag System (SPSS-24) was employed for data analysis.

Results

Presentation of the results of the tests of SWOM pre- and post-offensive skills of the first experimental group (SWOM strategy under the guidance of the teacher)

Table 2: Shows the arithmetic means, standard deviations and t-value for the pre- and post-tests of the first experimental group (using the SWOM strategy in the teacher's guidance style)

Skills	Unit of Measurement	Pre-test	Post-test	F	Sig
Shooting	Degree	5.33 0.617	7.86 0.639	11.76	0.000
Dodging	Degree	4.80 0.774	7.33 0.617	9.25	0.000
Passing	Number	18.1 1.73	23.50 1.27	9.781	0.000

*The tabular score at the df (9) and below the level of significance (0.05) is equal to (2.26).

Table 2 displays the statistical indicators pertaining to the test results obtained from the pre- and post-tests of offensive capabilities among the participants of the initial experimental

group. The findings presented in Table 2 indicate that the arithmetic means of all variables were higher in the dimensional measurement compared to the pre-measurement. Furthermore, statistical analysis revealed significant differences between the two tests, favoring the post-test. These results were supported by significant levels, which were found to be lower than the predetermined error rate of 0.05. Thus, the observed significant difference in the two measurements is considered statistically significant.

Presentation of the results of tests of SWOM pre- and post-offensive skills of the second experimental group (peer directed SWOM strategy)

Table 3: Shows the arithmetic means, standard deviations and t-value of the pre- and post-tests of the second experimental group (using the peer-guided SWOM strategy)

Skills	Unit of Measurement	Pre-test	Post-test	F	Sig
Shooting	Degree	4.32 0.610	8.86 0.631	12.72	0.000
Dodging	Degree	5.70 0.771	7.99 0.817	10.21	0.000
Passing	Number	17.5 1.63	24.50 1.22	9.98	0.000

*Tabular degree at df (9) and below the level of significance (0.05) is equal to (2.26)

Table 3 presents the statistical indicators pertaining to the test results obtained from the pre- and post-tests of offensive skills among the participants belonging to the second experimental group. The findings presented in Table 3 indicate that the arithmetic means of all variables were higher in the dimensional measurement compared to the pre-test. Furthermore, there were significant differences observed between the two tests, favoring the post-test. This conclusion is supported by the significance levels, which were found to be lower than the predetermined error rate of 0.05. These results suggest a significant difference between the two tests.

Presentation of the results of pre- and post-skill tests for SWOM offensive skills of the control group (the method used by the teacher)

Table 4: Shows the arithmetic means and standard deviations between the results of the pre- and post-tests of the third experimental group (control)

Skills	Unit of Measurement	Pre-test	Post-test	F	Sig
Shooting	Degree	5.13 6.33	6.33 1.11	3.52	0.000
Dodging	Degree	5.066 0.593	6.066 0.798	3.873	0.000
Passing	Number	17.08 2.66	10.20 1.62	3.440	0.000

*Tabular degree at df (9) and below the level of significance (0.05) is equal to (2.26)

Table (4) shows the statistical indicators of the test results in the pre- and post-tests of SWOME offensive skills of the control group members. The results of Table (4) showed that the values of the arithmetic means of all variables were better in the post-test than the pre-test, and there are significant differences between the two tests in favor of the post-test, and this is what the mechanism of significance levels indicated as they were less than the error rate (0.05), which indicates a significant difference for the two tests.

Discussing the results of SWOM pre- and post-tests for SWOM offensive skills of experimental and control research groups

The results presented in tables (2), (3), and (4) demonstrate the observed disparities between the pre- and post-tests of the offensive skills tests in the conducted research. It is evident

that significant differences exist for all tests under investigation, with the post-test yielding more favorable outcomes. Specifically, table (2) indicates the presence of significant differences in the first experimental group, and the researcher attributes these positive results to the efficacy of employing the SWOM strategy, which involves guiding the teacher in presenting educational material to students. This strategy encompasses six skills for critical thinking, as demonstrated by the model player, and is further supported by the teacher's explanatory explanations throughout all stages of performance. Each talent can be examined from multiple perspectives. One such perspective involves the method of constructing an initial motor program in the brain for the skill prior to its application. This approach promotes the accessibility and acquisition of past scientific knowledge related to the skill being taught. According to Henriksen *et al.* (2020) [18], their study affirms that the training approach allows students ample time to engage in independent work and experience autonomy in decision-making. This includes making choices regarding when to initiate tasks, the pace at which they work, and the timing of their performance. Additionally, students benefit from the opportunity to take breaks between tasks and receive feedback directly from the school. This assertion is substantiated by the research conducted by Chang, Ward, and Goodway (2020) [14]. The initial phase of an educational curriculum involves cultivating the student's understanding of the significance of knowledge and its impact on motor performance. This entails establishing foundational mental frameworks within the brain that pertain to various movements and skills. It is important to recognize that many performance errors are not solely attributable to physical deficiencies or inadequate practice, but rather stem from a lack of cognitive proficiency in relation to the specific skill and its execution. Regarding the second group, which implemented the SWOM strategy using peer guidance, it became evident to us that the group showed improvement

based on the post-test results and Table (3). The researcher attributes this superiority to the effective utilization of time for skill repetition by the learner. This method typically aids the student in rectifying their technical performance, particularly during the initial stage of skill acquisition. An advantageous characteristic of this method is the promotion of a cooperative atmosphere among students, wherein each student receives individualized feedback from their observing peer. According to Petancevski *et al.* (2022) [30], a crucial principle for effective learning is the learner's awareness of the outcomes of their responses. This necessitates the provision of feedback after the completion of any activity, informing the learner of the results of their actions. This feedback serves to enhance the learner's motivation and encourage their ongoing engagement in the learning process. The concurs with Ciampolini *et al.* (2019) [15] perspective that the learner, within the constructivist learning approach, assumes the role of an explorer who acquires knowledge through the application of scientific reasoning. The learner actively engages in the pursuit of understanding, taking on the responsibilities of managing and evaluating their own learning. In this context, the learner becomes an active participant, researcher, and investigator, seeking out suitable resolutions to problems, which represents the central objective of this instructional strategy. The researcher ascribes the superior performance of the first experimental group, as evidenced by the post-test results, to the implementation of the SWOM strategy with teacher guidance. Additionally, the second experimental group, which received peer guidance in the use of the SWOM strategy, demonstrated even greater superiority compared to the first experimental group. The control group exhibited a marginal advantage over the two experimental groups. It is worth noting that the methodology employed in this study solely relies on instructional commands, with the teacher directing students according to their judgment of appropriateness.

Presentation and discussion of the results of the (f) and (L.S.D) test results for SWOM offensive skills of the experimental and control research groups

Table 5: The results of the (F) test show the analysis of the single variance between the three research groups and within them for the post-test of SWOM offensive skills

Skills	Unit of Measurement	Source of variance	Sum of squares	DF	Mean of squares	F	Sig
Shooting	Degree	Between groups	22.81	2	11.40	13.78	0.000
		With groups	22.35	27	.828		
Dodging	Degree	Between groups	28.71	2	14.35	18.33	0.000
		With groups	21.15	27	.783		
Passing	Number	Between groups	41.55	2	20.77	35.89	0.000
		With groups	15.62	27	.579		

Table 6: Shows the difference in the media in the post-test and the value of the lowest significant difference (L.S.D) between the three research groups of the skill of aiming from the pivot

The three groups	The differences between M groups	The difference of the M	Sig
1-2	7.95-7.60	.350	.397
1-3	5.95-7.60	1.65*	.000
2-3	5.95-7.95	2.00*	.000

*Significant (D) when the p-value is less than the test significance value of (0.05)

Table 7: Shows the difference in the media in the post-test and the value of the lowest significant difference (L.S.D) between the three research groups of simple deception skill.

The three groups	The differences between M groups	The difference of the M	Sig
1-2	7.95-7.90	.050	.900
1-3	5.85-7.90	2.05*	.000
2-3	5.85-7.95	2.10*	.000

*Significant (D) when the p-value is less than the test significance value of (0.05)

Table 8: Shows the difference in the media in the post-test and the value of the least significant difference (L.S.D) between the three research groups of handling skill.

The three groups	The differences between M groups	The difference of the M	Sig
1-2	8.35-7.30	1.05*	.005
1-3	5.50-7.30	1.80*	.000
2-3	5.50-8.35	2.85*	.000

*Significant (D) when the p-value is less than the test significance value of (0.05)

Discussion of the results of the test (f) and (L.S. D) after SWOM offensive skills of the experimental and control research groups

Based on the analysis of variance results presented in Tables 5, 6, 7, and 8, it is evident that significant differences exist among the three research groups. Furthermore, upon examining the tables containing the least significant difference for the variables under investigation, it becomes apparent that the second experimental group, which employed the SWOM strategy by instructing peers in the remaining groups, achieved the highest performance. The researcher attributes this superiority to the effective utilization of time in practicing the skill by the learner, as they receive immediate and direct feedback from the observing student. The veracity of this statement has been verified. According to Pino-Ortega *et al.* (2021) [31], feedback emerges as the predominant factor influencing performance and learning, as it is found that performance cannot be enhanced in the absence of feedback. The researcher posits that the purpose of achieving excellence is to familiarize students with competition, drawing conclusions, and presenting results to colleagues. Additionally, the researcher emphasizes the significance of feedback in enhancing skill performance, particularly in the context of motor learning. Feedback plays a crucial role in modifying movement patterns and motor behavior during the initial stages of learning. Furthermore, the researcher highlights the importance of employing the SWOM strategy, which encompasses six key skills, in facilitating the attainment of excellence. The effective utilization of feedback allows learners to receive continuous and immediate information about their performance, enabling them to identify and rectify errors. This feedback also serves as a source of motivation, encouraging learners to persist in the learning process. Additionally, the implementation of the SWOM strategy, which involves presenting educational material to students, has proven to be effective. This strategy encompasses six thinking skills that are modeled by an expert and further explained by the subject teacher. It covers all stages of skill performance and provides multiple perspectives. Moreover, this strategy facilitates the development of an initial motor program in the brain, enhancing the availability and acquisition of prior scientific knowledge related to the skill being taught. The researcher posits that engaging in problem-solving activities pertaining to performance fosters a shift in the learner's role from a passive recipient to an active participant in the learning process. This assertion is supported by Al-Sarry and Ghadban (2020) [10], who advocate for the implementation of educational strategies that immerse learners in authentic scenarios, prompting their cognitive faculties to strive for cognitive equilibrium. This state of motivation is sought after by learners, as it is attained upon reaching a solution, answer, or discovery pertaining to the subject matter being taught. In relation to the instructional approach of SWOM, the findings demonstrated the superiority of the second experimental group in comparison to the control group. This observation supports the notion that the instructional aids, encompassing

diverse educational materials, educational devices, and presentation techniques, possess an engaging quality. This quality facilitates the delivery of educational content in a novel, accessible, and uncomplicated manner. Consequently, learners are inclined to develop a fondness for the subject matter, which enhances their motivation and fosters their autonomy and self-sufficiency in the learning process. In relation to the instructional approach of SWOM, the findings demonstrated the superiority of the second experimental group in comparison to the control group. This observation supports the notion that the instructional aids, encompassing diverse educational materials, educational devices, and presentation techniques, possess an engaging quality. This quality facilitates the delivery of educational content in a novel, accessible, and uncomplicated manner. Consequently, learners are inclined to develop a fondness for the subject matter, which enhances their motivation and fosters their autonomy and self-sufficiency in the learning process (Song & Kao, 2023) [35]. The researcher ascribes the cause for the subpar performance of the students in the control group, in contrast to the two experimental groups, to the inadequacy of the learning style employed by the teacher. This learning style fails to encompass all the objectives of physical education, thereby diminishing attention towards the principle of individual differences and impeding students' capacity for innovation, achievement, and self-confidence. The aforementioned research has successfully accomplished its aims and hypotheses.

Conclusions

Based on the findings obtained by the researcher, the following conclusions were drawn.

1. Teaching using the SWOM strategy in the teacher-guided style has had a positive impact on the learning of the skills under study.
2. Teaching using the peer guided (SWOM) strategy is better and has had a positive impact on the learning of the skills under study.
3. The method used in college had little effect compared to the two experimental groups in learning the skills under study.

Recommendations

Based on the findings of the study, the researcher proposes the following recommendations:

1. There is a necessity to incorporate the utilization of the Self-Organized Learning (SWOM) technique within the instructional practices of both teachers and peers in order to enhance the efficacy of skill acquisition among students in the second stage of education.
2. It is imperative for the instructor of the discipline to possess a comprehensive understanding of contemporary methodologies and tactics, while also emphasizing the active engagement of the learner in the educational process, rather than solely assuming a passive role as a recipient of knowledge.
3. Undertaking a comparable investigation on other phases,

occurrences, and additional resources.

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